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ABSTRACT

A study examined the interaction strategies of one teacher for promoting student writing in the dialogue journals of 12 limited-English-proficient sixth grade students and the effect of these strategies on the length and complexity of the students' writing. The teacher strategies identified include requests for a reply and personal contributions made in teacher comments. It was found that this teacher's approach is to respond to topics introduced by the students rather than to introduce topics, and to contribute to the dialogue by making statements and expressing opinions rather than eliciting student writing with questions. This technique results in a collaborative writing effort, with teacher and students mutually developing topics of interest to them and with the students writing far more than the minimum required. (Author/MSE)

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THE EFFECT OF TEACHER STRATEGIES ON STUDENTS' INTERACTIVE WRITING: THE CASE OF DIALOGUE JOURNALS

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Abstract

One of the goals of dialogue journals--interactive written communication between a teacher and students--is that students learn to communicate effectively in writing. In the written dialogue, the teacher can employ a number of strategies to promote this communication. In this study we examine the interaction strategies of one teacher for promoting student writing in the dialogue journals of 12 limited English proficient sixth grade students and the effect of these strategies on the length and complexity of the students' writing. We find that in the journals, this teacher responds to topics introduced by the students rather than introducing topics for writing. She also contributes to the dialogue, making statements, expressing opinions, etc., rather than eliciting student writing with questions. The result is that the writing is a collaborative effort, with the students and teacher mutually developing topics of interest to them and the students writing far more than the minimum required.

THE EFFECT OF TEACHER STRATEGIES ON STUDENTS' INTERACTIVE WRITING: THE CASE OF DIALOGUE JOURNALS

Joy Kreeft Peyton
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Dialogue journal writing, written interaction between teachers and students, gives students the opportunity to write about topics of their choice, to focus primarily on the meaning of what they write rather than on its form, and to write to an audience who is known and who responds to their ideas rather than evaluating what they have said or how they have said it. Therefore, this kind of writing holds promise as a way to promote the writing development of limited English proficient students. Although dialogue journals have recently become popular as a teaching practice in a wide range of educational contexts, little is known about the nature of the interaction itself--the strategies that teachers actually use in written interaction and the relative success of those strategies for promoting the writing of their students. In this study, we examine the interaction strategies in the dialogue journal writing of one teacher and their effect on the writing of her students, who were learning English as a second language.

Interaction in Language Learning

The crucial role that interaction plays in the process of acquiring a language is clearly demonstrated in studies of first language acquisition (Snow & Ferguson, 1977; Wells, 1981, 1986). In adult-child conversation, an adult models the forms, functions, and uses of a language, which are gradually internalized by the child. At the same time, the child's contributions to the interaction influence those of the adult, so that the adult language input is geared to the child's level (Holzman, 1983).

The importance of interaction in learning is not confined to the acquisition of language, but extends to the development of thought and problem-solving abilities as well. Studies of children in problem-solving situations show that as they work in an interactional tutorial context, they eventually internalize the help received from the tutor and move toward accomplishing tasks they may not have been able to accomplish alone (Cazden, 1983; Greenfield, 1984; McNamee, 1979; Rogoff & Gardner, 1984).

The process of learning through interaction is equally important for second language learners (Hatch, 1978; Krashen, 1978; Seliger, 1983). In native speaker/nonnative speaker interactions outside the classroom, native speakers promote and extend nonnative speakers' participation by accepting their utterances as valid conversational contributions, leading them into conversation with questions, and modifying features of the input and interaction (Long, 1981, 1982), in a manner similar to caretakers and tutors in conversation with children.

Interaction in Writing

Until recently, interest in interaction and learning has focused primarily on oral language use, since writing has been considered to be a relatively solitary, non-interactive activity. However, several scholars argue that writing, like speech, is also socially embedded, functional, and interactive, and that writing development, like oral language development, may be facilitated by opportunities to engage in meaningful interaction (Elbow, 1985; Kreeft, 1984; Shuy, in press; Staton, 1984; Snow, 1983). Studies of written interaction in letters (Heath & Branscombe, 1985), computer networks (Levin, Riel, Rowe, & Boruta, 1985), and dialogue journals with native English speakers (Staton, Shuy, Kreeft Peyton, & Reed, in press) and limited English proficient students (Hayes & Bahruth, 1985; Kreeft, Shuy, Staton, Reed & Morroy, 1984) indicate that when students write over time with real audiences about topics that interest and concern them, there is

remarkable development in their desire to use written language and in their facility with it.

Dialogue journal writing represents one instance of a growing number of approaches to interactive writing. Students write regularly (each day if possible) to the teacher. The teacher writes back, ideally each time the students write--not to evaluate or correct the writing, but as a co-participant in it. Because the interaction is written and time passes between contributions by the participants, both can introduce a number of topics in one journal entry. Topics are introduced, responded to, and dropped as the writers see fit. Where there is mutual interest, a topic can be continued for an extended period of time.

Dialogue journal writing has some of the qualities often considered unique to speech, such as regular change of "speaker" and turn taking, continual feedback from the reader, shared topic development, etc. At the same time, it has some of the conventional attributes of writing: Writers use lexical and syntactic means to express meaning without assistance from intonation or other paralinguistic cues available in speech, an audience is not immediately present to negotiate meaning, feedback is delayed, etc. As a result, dialogue journal writing can be an effective way to develop students' writing abilities and assist them in performing more formal composing tasks by giving them opportunities to write in an interactive, "speech-like" context.

The first major studies of dialogue journal writing found that the writing was primarily student-generated (the majority of topics were introduced by the students) and included a variety of language functions, genres, and topics (both personal and academic). Over time, students tended to focus on fewer topics with more elaboration and develop a better sense of audience, features characteristic of mature writing (Staton et al., in press). With limited English pro-

ficient students, the teacher modified her written input to individual students based on her assessment of their English proficiency, and the students were able to develop their facility with the forms, functions, and uses of written English at the same time that their oral language was developing (Kreeft et al., 1984).

Because the study of interactive writing is a new field of inquiry, most of our knowledge of the effect that the teacher's participation in the interaction might have on student participation must come from studies of oral interaction between teachers and students.

Teacher Strategies in Oral Classroom Interaction

Most of the research on teacher strategies in oral classroom interaction concentrates on the frequency and type of teacher questions. The bulk of this research shows that questions are the most predominant language function used by teachers, occupying as much as 95% of teacher talk (Dillon, 1982; Heath, 1982; Politzer, Ramirez, & Lewis, 1981; Wood, Wood, Griffiths, Howarth, & Howarth, 1982). Teacher questions usually serve to establish and maintain teacher control (McHoul, 1978; Mishler, 1975; Mehan, 1979; Politzer et al., 1981). Hyman (1979), in a discussion of teacher strategies in classrooms, concludes, "It is impossible to conceive of teaching without asking questions."

A smaller body of research examines the effect of teacher questions on various aspects of student performance. Although results and conclusions are mixed, some studies have found that the kinds of questions the teacher asks have an impact on students' thought processes (Arnold, Atwood, & Rogers, 1973; Taba, Levine, & Elzey, 1964) and achievement (Buggy, 1971; Kleinman, 1965; Ladd, 1969). They also influence length (Dillon, 1981; Smith, 1978) and cognitive level of student responses (Arnold, Atwood, & Rogers, 1974; Willson, 1973). Recent research in ESL classrooms (Brock, 1986; Long & Crooks, 1986) indicates that the type of question asked by the teacher influences both the length and

complexity of student responses, with "referential" questions (questions to which the teacher does not already know the answer) eliciting longer and more complex student responses than "display" questions (questions to which the teacher does know the answer and is testing student knowledge).

Even less research has been done on the effects of teacher strategies other than questions on students' language production. Berdán and García (1982), in interviews with bilingual children, found that teachers' previous utterances (including elaborations and questions) had an effect on the length and complexity of subsequent student utterances. Likewise, Wood et al. (1980, 1982, 1984), in studies of teacher strategies with hearing-impaired elementary children, found that the teacher's conversational style influenced both the length of utterance and degree of initiative displayed by the children, with more "controlling" moves, such as questions, resulting in shorter student replies and decreased willingness to participate. Wood et al. (1982) conclude,

> Where a teacher is high in controlling moves (by asking a lot of questions), children tend to respond systematically, but are unlikely to elaborate on their replies to questions or to produce relatively long utterances. However, where a teacher integrates questions with a higher frequency of less controlling moves by making contributions of her own or simply acknowledging the child's utterance, the child is more likely to produce long utterances and to elaborate on his answers to her questions. (p. 305)

The results of these studies suggest that written teacher strategies in dialogue journals may also have a differential effect on student responses.

Teacher Strategies in Dialogue Journal Writing

In this study, we examined the written strategies of one experienced teacher who had been using dialogue journals, in classes with native English speakers and in classes made up almost entirely of limited English proficient students, for over 15 years. A modified case study approach was chosen because it allows a detailed examination of the effect of various teacher strategies without having to control for idiosyncracies among teachers. Although this

approach does not lend itself to generalizations, it is useful in identifying specific features of the processes of interaction between a teacher and her students. We concentrated on the teacher's direct attempts to elicit a response (usually in the form of questions), so prevalent in oral classroom discourse, vs. a broad category of other strategies that she uses. Our questions were:

1. How are certain strategies used by the teacher in her dialogue journal writing?
2. Do different teacher strategies affect student response rate and the quantity and syntactic complexity of student writing?
3. Are there differences in teacher strategies and student writing based on the level of English proficiency of the students?

While quantity and syntactic complexity do not in themselves indicate effective writing on the part of students, they are important indicators of student willingness and ability to participate in the written interaction and to produce elaborated text. Furthermore, these indices show correlations with writers' maturity (Hunt, 1965).

Method

Sample

The dialogue journal writing of 12 limited English proficient students from a class of 26 was examined. Six were Asian (from the Philippines, Burma, Korea, Vietnam, and China) and 6 were Hispanics (from El Salvador and Mexico). They were equally distributed by sex. The time the students had spent in schools in the United States at the beginning of the school year ranged from 1 month to 5 years (two students were born here and had spent 5 years in U.S. schools, but their parents were Asian or Hispanic and they spoke Chinese or Spanish at home and in their community, so they were still considered limited English proficient). The students were divided into three groups of four each ("high," "mid," and "low," reflecting English language proficiency) to determine whether there

might be differences in teacher strategies and student writing based on this factor. The groups were determined primarily on the basis of teacher judgment, through informal observations throughout the year. We verified her placement of students by examining their scores on the language section of the Survey of Essential Skills, a test administered to all sixth grade students at the end of the school year.

Since a modified case study approach was used, all of the subject variables controlled could not be systematically investigated. We have chosen to examine different English proficiency levels because research has shown that native speakers modify their language addressed to second language learners according to the learners' English proficiency (Long, 1981, 1982), and it is commonly assumed that level of language proficiency correlates with the quantity and complexity of a language learner's production.

As part of their daily routine throughout the school year, the students were required to write a minimum of three sentences a day in their dialogue journals. Beyond that stipulation, they were free to decide when they would write, how much to write and what to write about. Each student's journal consisted of from 100 to 150 interactions (one student and one accompanying teacher entry were considered an "interaction"). A sample of 15 consecutive interactions was selected from each student's journal in the spring for analysis. This represented roughly a 3-week period (depending on student attendance) in March and April, after they had been writing in the journals for about 7 months. The sample was taken from later in the school year to provide time for the students to become experienced with this kind of writing, for the teacher to get to know each student, and for patterns of interaction to become established. In a 15-interaction sample, approximately 45 topics were discussed (they tended to discuss about 3 topics per day), providing sufficient data for discerning patterns in teacher strategies and student responses.

Identification of Teacher Strategies

Each of the teacher's dialogue journal entries was first divided into topics and then analyzed for teacher strategy on two parameters: whether the topic was initiated by the teacher or was a response to what the student had written, and whether or not there was a direct solicitation of a student response. For example, in the following interaction the student, Michael's, entry consists of three topics (separated by # to indicate topic change). The teacher's entry consists of two topics. The first is a response to what Michael wrote about his stamps. The second is a topic initiation, about the classroom aide who was helping him. (Student and teacher writing is reproduced here as it was written in the journals. Errors in grammar, punctuation, and spelling have not been corrected.)

Michael: (March 24) # Yes I did the test well in it. I think I miss only number 1 and 7 becuse one said write the names of the picture and seven is write the name of all the picture. I still have to take the test becuse I like to take the test. # I think if we finish the sign it is going to look very good on the board. # I trade the space stamp with the Simon for the Sport stamp. #

Teacher: (March 24) # You have so many really fine, fine stamps! How smart you are to get your family in Burma to send you stamps. Some are so beautiful! # (Response)

Did you like to have Miss W help you this morning? She is so anxious to help everybody. It is good to have her to help us. # (Initiation)

In this classification system, every teacher topic was considered either an initiation or a response. Later continuations of the same topic were included in the "response" category, as responses to a previously mentioned topic.

The teacher's strategies used within topic initiations and topic responses were divided into two broad categories, which differ in terms of their strength in soliciting a student response. One, "requests for a reply," involves active solicitation of a response from the student while the other, "personal contributions" (a label used by Wood et al., 1984 to refer to a broad range of

statements and comments), does not solicit a student response and grants the student complete freedom either to respond to or ignore the teacher's writing.

Requests for a reply can request information, opinion, or clarification. Although the request is usually stated in interrogative form ("How was your trip?"), it can also be stated as an imperative ("Tell me about your trip") or a declarative ("I would like to know about your trip"). Excerpts from the teacher's entries illustrate each request type.

> Request for information: Is that next Tuesday that you will go to the taping (or is it the filming) of "La Verne and Shirley?" Lucky you! That should be very interesting! Be sure to tell me about it!
>
> Request for opinion: Do you like our sign? I think it looks very good.
>
> Request for clarification: Getting the shot was important. Do you mean that your mother had to buy your lunch at the hospital and it cost $6.00? I hope your hand feels better.

Personal contributions is a broad category which includes all statements and comments made by the teacher. They do not require or even explicitly invite a reply. They can include a variety of language functions. Shuy (1984), for example, identified 14 language functions in the dialogue journal writing of this teacher with these students, including such functions as reporting personal and general facts and opinions, thanking, evaluating, predicting, apologizing, and giving directives, among others. The common thread in these functions is that they contain no overt indication that a reply is expected.

Thus, each teacher topic within an entry was classified for strategies in two ways--as being either an "initiation" or a "response," and as consisting of one or more "requests for a reply" or "personal contributions," or a combination of the two. In the interaction with Michael on page 10, the teacher's first topic, related to Michael's stamps, consists of "personal contributions," expressions of teacher opinion with no explicit request for a reply. The second consists of a combination of a request for a reply and personal contributions.

Analysis of Student Responses

To ascertain whether certain teacher strategies elicit student writing more than others, we first examined whether or not the student responded at all in the following entry to the topic in question. If there was a response, we then examined the amount the student wrote, as measured by the number of words, and the sentence-level complexity of the writing as measured by the number of words per T-unit. Hunt (1965) first developed the concept of the T-unit as an index of growth in syntactic maturity of school children's writing. Although there has been some discussion about the validity of T-unit length as a measure of syntactic complexity (Freeman, 1978; Gaies, 1980), it nonetheless provides one conventional measure which has been used in both first and second language research and has been shown to correlate with linguistic and maturational development.

Hunt (1970) defines a T-unit as "a main clause plus all subordinate clauses and nonclausal structures attached to or embedded in it" (p. 4). For our purposes, a count of mean words per T-unit was used to determine whether certain strategies resulted in brief, syntactically reduced replies (such as, request--"Did you enjoy the game?"; response--"No I didn't") or more elaborated explanations (such as "It was OK, but Gordon was cheating so I quit").

The following interaction between Claudia and the teacher illustrates the way students' entries were analyzed.

Teacher: (March 24) # You could see if you could get Zia from the Public Library. Scott O'Dell wrote it too. It tells about the Indian girl being rescued and going to live at the Mission. # Response-C

I hope you make many bridges! Using compound words makes it a fun kind of homework. # Response-C

Claudia: (March 25) # You should read a better book after the one you are reading please, / I'll try to get the book called Zia / will you read that one after the moaning Cave please. / I think we will like it better than the Island Of The Blue Dolphins or maybe just as much Response-C #

Claudia: (continued)
when are you going to correct the science experiments & put them on the chart on the blackboard, # Initiation

My handwriting is much bigger today / & in 3 days you'll see I'll writte like this / can you read my handwritting this size? of small? / or do I have to do it like this / or how is it more readible. # Initiation

Each student entry was divided into topics (separated by #) and T-units within topic (separated by /), and each topic was coded as an initiation or a response to a previously initiated topic. Then the number of words and mean number of T-units per topic were calculated. Claudia's entry above consists of three topics. She responded to one of the two topics written about by the teacher and initiated two topics. Her first topic, about the book Zia, is a response to the teacher's, which consists of personal contributions (C). It is 50 words and 4 T-units long, for an average of 12.5 words per T-unit.

Results

Teacher Strategies

This teacher primarily took the role of a respondent to topics, rather than an initiator of topics, in her writing. Table 1 shows that most of the topics that she wrote about (around 3 out of 4) were responses to those topics the students had written about in their previous entry. (The figures in the tables represent composite numbers for three groups of four students each.) This does not necessarily mean that the students initiated the topics, as they could have been initiated by either the teacher or the student in some earlier entry. But the fact that the teacher tended to respond to those topics that the students wrote about indicates that she wanted to continue topics they were interested in.

There does not appear to be a difference in topic initiation and response patterns according to the English proficiency of the students. The significance in Table 1 is probably attributable to the difference in frequency of teacher initiations and responses rather than student proficiency level.

Table 1

Topic-Initiation and Topic-Response Patterns in the Teacher's Entries

	Topic initiations		Topic responses	
	N	%	N	%
With high-proficiency students	48	22%	171	78%
With mid-proficiency students	54	30%	127	70%
With low-proficiency students	28	18%	126	82%

$X^2 = 6.73$, df = 2, $p < .05$

The teacher most frequently made personal contributions in her entries, rather than directly eliciting a response. When she did request a reply from the students, the request was most often accompanied by a personal contribution (only 7 - 12% of her topics lack a contribution), as shown in Table 2. Again, the primary basis of variation seems to be among the three strategies--contributions, contributions + requests, and requests--rather than among the three student proficiency levels.

The teacher's strategies differed somewhat depending on whether she was initiating or responding to a topic (Table 3 presents the data shown in Table 2 in a more detailed manner, breaking down further the three basic strategies used in initiations and responses). Although the formal analysis does not indicate significant differences, several non-significant trends are noteworthy. The most noteworthy pattern is the consistent infrequency of requests for a reply in her responses to student topics (only 5 - 6% of her responses lack contributions). In topic initiations, the strategies are more evenly distributed, but topic initiations containing personal contributions still outweigh those without contributions by a large margin.

Table 2

Teacher Strategies

	C		CR		R	
	N	%	N	%	N	%
With high-proficiency students	133	62%	57	26%	26	12%
With mid-proficiency students	93	52%	63	35%	22	12%
With low-proficiency students	108	71%	33	22%	11	7%

$X^2 = 13.05$, df = 4, $p < .05$

Table 3

Teacher Strategies in Topic Initiations and Topic Responses

	Topic initiations						Topic responses					
	C		CR		R		C		CR		R	
	N	%	N	%	N	%	N	%	N	%	N	%
With high-proficiency students	20	43%	11	24%	15	33%	113	66%	46	27%	11	6%
With mid-proficiency students	16	30%	21	40%	16	30%	77	62%	42	34%	6	5%
With low-proficiency students	16	59%	6	22%	5	19%	92	74%	27	22%	6	5%
	$X^2 = 7.79$, df = 4, n.s.						$X^2 = 5.19$, df = 4, n.s.					

Note. C = Personal contribution(s) only. CR = Personal contribution(s) and request(s) for a reply. R = Request(s) for reply only.

Sometimes it appears that the teacher was eliciting student writing by initiating a topic with a question or two and no further contributions, as in the following exchange with Ben:

Teacher: (April 1) How do you like our name poems? Do you think it will be fun to read everyone's poem about themselves?

Ben: (April 2) I think I love it and I think they are so marvelous too. Some of them are neat. I saw some of the name poems but I didn't saw all of them.

However, once the student wrote about a topic, she rarely simply elicited more writing with questions, but rather contributed to the development of the topic herself, as in the following interaction from Claudia's journal (extracted from longer entries in which other topics were also discussed):

Claudia: (March 17) oh Mrs. Reed what do you feed chickens here? We have a hen that layd & egg.

Teacher: (March 17) Chickens will eat scraps of bread, wheat, seeds, water and some insects.

Claudia: (March 18) oh but the hen has some white lines in her dirt of her body that throws up by a hole. I don't know what you call it. She has wat it looks like worms, but little worms those white ugly worms & they are very skiny, what are they? do you know how to get the hen of her stomach sickness or is it usual for her to be like that because she is layng eggs & she could even lay 30 eggs so I don't know if it is usual or if it is a sickness of her.

oh poor hen she cooks & coocks when I say pretty hen in a low low voice & she looks like she is used to children because she is cook & cooking when I say pretty things, oh she's so nice!!!!

Teacher: (March 18) It is normal for the feces (the waste from your hen's body) to have white lines in it. I've never heard of a hen having worms--but it is possible. Go to a pet shop and ask them or to a veterinarian. Who gave you the hen? Maybe they will know.

We say a hen clucks. It is a pleasant little sound as though they are happy. They cackle when they lay an egg! That is usually loud! Does your hen cackle?

I think hens like having people or other hens around, don't you?

Claudia: (March 19) Yes I like & she likes people around her & when I talk she kinds of understands & when she doesn't she kind of looks up so I can tell her again whatever I told her & then she understands me, oh you

Claudia: (continued) should see her. I'll try to get Nicky to see it, & maybe some more friends to see it because they don't believe me. Maybe in the future I will bring it to school, then we could study her & see how she is, looks, & how she eats, don't you think it would be a great idea, (I do).
(Emphasis added.)

Student Writing

Response rate and quantity of writing. As shown in Table 4, a request for a reply by the teacher in writing resulted in a student response more frequently (from 46 - 73% of the time) than a personal contribution (C) with no accompanying request (responded to approximately 30% of the time). This was true for the three groups of students, whether the request occurred alone (R) or was accompanied by personal contributions.

Table 4

Frequency of Student Response to Various Teacher Strategies

	C		CR		R	
	F	%	F	%	F	%
High-proficiency students	37/133	28%	29/57	51%	12/26	46%
Mid-proficiency students	19/93	20%	46/63	73%	15/22	68%
Low-proficiency students	29/108	27%	20/33	61%	7/11	64%

Note. C = Personal contribution(s) only. CR = Personal contribution(s) and request(s) for a reply. R = Request(s) for reply only. F = Frequency of student response to teacher strategy.

Although questions tended to elicit more frequent responses, they did not necessarily elicit more writing. In fact, from the figures in Table 5 it appears that students in the high-proficiency group tended to write more in response to teacher topics containing personal contributions than in response to questions alone. Patterns based on number of words are somewhat idiosyncractic, as shown by the high standard deviations. However, individual writers show a tendency to write more in response to a teacher topic containing a personal contribution, with 7 out of 11 students for which comparisons can be made following this pattern.

It should be noted that the number of words shown in Table 5 represents student responses to individual teacher topics and not the total number of words per student entry. Most students routinely wrote about several topics in one entry, and considerably more than the three-sentence minimum required.

Table 5

Mean Number of Words in Student Responses to Teacher Strategies

	C	CR	R
	$\bar{X}$ (SD)	$\bar{X}$ (SD)	$\bar{X}$ (SD)
High-proficiency students	44.9 (25.2)	56.3 (34.0)	27.0 (3.3)
Mid-proficiency students	40.5 (40.3)	31.0 (21.1)	34.7 (34.2)
Low-proficiency students	12.2 (6.0)	24.5 (19.7)	15.8 (1.3)

Note. C = Personal contribution(s) only. CR = Personal contribution(s) and request(s) for a reply. R = Request(s) for reply only.

At times, student responses to questions consisted of only a brief answer with no elaboration, as in these interactions with Simon and Douglas:

Teacher: (April 2) Good! You can show me how to make an Easter egg with a compass.

Do you remember what kind of plant we planted today?

Simon: (April 3) Yes, I do. I like the complete poems. I like my math but I got F.

Teacher: (April 3) Oh, my! What happened in your math? Would you like some help?

Simon: (April 6) I like the social studies. I like the math. I do not know. No I not.
(Emphasis added.)

Teacher: (April 2) Why do you think Sven hit you? Was he being playful? Had you done something to him? Do you have any idea about how to deal with that situation?

Will your uniforms be the same color as last year? They were blue & white, weren't they?

Did you get to plant a plant today?

Douglas: (April 3) I do not know why Sven hit me. I think he was being playful and I did not anything to him.

Yes our uniform is going to as same as last year's, blue and white.

No I did not get my plant done because there was not enough.

Simon answered the questions as briefly as possible and wrote about other topics. In her entry to Douglas, the teacher asked only questions, a pattern that occurred very rarely in her writing. Douglas carefully answered each question with little or no elaboration, and ignored the last question about getting hit by Sven ("Do you have any idea about how to deal with that situation?"), a question which would probably require considerable elaboration. The reason for these minimal replies on the part of the students may be that a request alone, without any personal contribution on the part of the teacher, elicits a response, but gives students very little to build on in formulating it and little motivation to reply.

Individual variation and non-significant differences in length of responses to various teacher strategies indicate that other factors also exerted a powerful influence on the amount that students wrote. One such factor seems to be topic. An example from Simon's journal demonstrates the overriding effect that topic can have. Simon usually wrote very brief entries (briefer in most cases than those of any other student), consisting of short sentences about several topics. However, one day he found a bird and cared for it, and a few days later it died. The following interaction resulted.

Simon: (March 31) I finisht my art. I like the bird. I like the math becase I did my math was art.

Teacher: (March 31) The baby bird really is getting stronger. I do hope he lives, don't you?

Your art looks nice. Do you see it hanging up?

Simon: (April 1) Yes I do. I give some food. Yes I do to but he ded [died] but it was 95° to grist [degrees] but I think he was cool. I barisd [buried] the bird and I put a sign abut the bird. I had many bird at Korea but I like the bire I had March 30 and I like the bird but he ded. but I like the bird best is my life and he was a baby and he can not fly and I did not what to do. I can not sit on the bird the bird will be packaah[?] I have puave [?] I had the bird went I grol up [grow up]. I barad my sife [buried it myself]. When I grow up I will relmader [remember] the bird. I had feed wife the bird and I like the bird it was the best bird I had in my life and my frilme [family] like to.

Teacher: (April 1) I am so sorry the baby bird died. It is not your fault! You did everything you could to keep it alive. We learned something about baby birds from him.

In his April 1 entry, Simon responded to the teacher's question about his art with a simple "Yes I do." Then, in response to her statements and question about his bird, he wrote extensively (151 words; the mean word length for his other responding entries is 13.5). This event was so important to him that he probably would have written about it regardless of what the teacher wrote.

Another influencing factor is probably time. The strong effects of teacher strategy on student production found by researchers like Berdán and García (1982) and Wood et al. (1980, 1982, 1984) are probably due to the fact that they

were studying oral interaction, where student responses are much more immediate and therefore much more constrained by the teacher's previous turn. In the dialogue journal interaction, the writer has considerably more time to make choices about which topics to address briefly and which to develop more fully; therefore, the strategies used by the other writer in the previous turn seem to exert less influence.

The students in this study seemed to write the most freely when they and the teacher found a topic in common, that they were both interested in and had something to write about. In these interactions, the combination of teacher contributions and questions was a natural outcome of her interest, and the result was enthusiastic student participation in the writing. The following interaction with Ben is one of many similar such extended conversations that occurred in his journal.

Teacher: (March 30, 1981) I feel so sad that we have such bad things happen in our country. Do you?

Ben: (March 31) I feel sorry too for all the happenings that happen in this country. You know that its the eight time that that happened. The first three was along time ago. It was somewhere Lincoln's time. Its too bad that there's some crazy people in here in our country. At first they thought that he didn't shoot him, but he did. I am so glad that the president today are alive and also the secret service man. Also the Washington D.C. policeman and Jim Brady the secretary. Mr. Brady is the worst person that got hit. How many times did you see when the shooting started? I saw the shooting when it started twenty times. Would you believe that twenty times!!! Wow!!! That's only in the morning. There's ten more (the same thing) again that I saw in the evening. That totals to thirty. Now that's amazing!!!!!

Teacher: (March 31) Yes! It is amazing! You must have done nothing but watch television all evening. I saw it on the evening news. I am so thankful of the men are recovering so well! Can you imagine how sad the families of Mr. Hinkley and Mr. Brady must feel?

This discussion continued for several more days, with both writers asking and answering questions, but spending most of their time recounting what they had recently learned. In cases like these, the journal writing clearly had become a joint undertaking.

Syntactic complexity of student responses to various teacher strategies. Teacher strategies do not appear to have any effect on the syntactic complexity of the students' writing, as shown in Table 6. Instead, syntactic complexity seems to vary according to the students' level of English proficiency (as does quantity; see Table 5). Students rated "high" wrote the most complex responses by this measure (a mean of 10.3 words per T-unit for the three strategies combined, which is close to the mean that Hunt [1965] found for eighth grade students); those rated "mid," the next most complex (a mean of 8.1 words/T-unit), equivalent to what Hunt found for fourth grade students); and those rated "low," the least complex responses (a mean of 6.4 words per T-unit; Hunt's study did not extend below the fourth grade to this level of writing).

Student writing in self-initiated topics. For student and teacher, the dialogue journal writing involved both initiating topics and responding to

Table 6

Syntactic Complexity of Student Responses to Teacher Strategies

	C		CR		R	
	$\bar{X}$[a]	(SD)	$\bar{X}$	(SD)	$\bar{X}$	(SD)
High-proficiency students	10.0	(0.9)	11.2	(0.3)	9.7	(1.4)
Mid-proficiency students	8.2	(1.0)	8.7	(0.5)	7.4	(1.7)
Low-proficiency students	6.1	(1.7)	6.8	(0.7)	8.0[b]	(3.0)

Note. C = Personal contribution(s) only. CR = Personal contribution(s) and request(s) for a reply. R = Request(s) for reply only.

[a]$\bar{X}$ = mean number of words per T-unit. [b]One student's writing in one response to a request was uncharacteristically long. When that student is excluded from the group total, the pattern is more consistent ($\bar{X}$ = 6.3, SD = 0.9).

topics written about by the other writer. While this teacher's interaction pattern was to respond to topics written about by the students rather than initiate them herself (see Table 2), Table 7 shows that the students initiated most of the topics they wrote about--from 3 to 6 times as many as the teacher did. This is probably because the students wrote first each day, and the teacher responded to each journal each night, therefore putting the onus on the students to "come up with" something to write about. The teacher saw her role in the interaction as supporting and sustaining student writing by being a good conversational partner, to provide an opportunity for writing that she did not direct (L. Reed, personal communication, July, 1980).

Most students wrote roughly the same amount in topics they initiated themselves as they did in those they responded to (compare Tables 5 and 7), with roughly the same amount of syntactic complexity (Tables 6 and 7). Again, the three groups differ in number of words in topic initiations and number of words per T-unit, with the "highs" producing the most writing with the greatest syntactic complexity and the "lows," the least.

Table 7

Number, Length, and Syntactic Complexity of Student Topic Initiations

	Student-initiated topics			
	N	%	Mean words in initiations (SD)	Mean words/ T-unit (SD)
High-proficiency students	185	70%	51.5 (24.7)	10.8 (1.1)
Mid-proficiency students	158	66%	33.3 (12.4)	9.4 (0.7)
Low-proficiency students	188	77%	15.5 (3.0)	6.5 (0.9)

Discussion

The composite study of responses by three groups of students to a single teacher is obviously a limited sample of interactive writing. However, because of this teacher's experience and reported success in using dialogue journals over a sustained period of time (Kreeft et al., 1984; Staton et al., in press), an examination of her strategies provides valuable information about one successful teacher's approach. Likewise, patterns of student writing found here may not be generalizable to other groups of students. Future research on teacher strategies in interactive writing might compare teachers using different interaction patterns, and examine the effects of varying strategies with larger numbers of students.

When teachers begin to think about writing in dialogue journals, they naturally want students to write freely and extend and elaborate on topics, and they see their role as promoting that writing. Our observations of teachers beginning to use dialogue journals indicate that they often apply their experience with oral classroom interaction to the writing, tending to initiate topics for the students to write about and to ask a lot of questions as a way to elicit more writing. We have seen dialogue journal interactions in which the teacher's primary contribution has been to ask questions. We have also observed or heard from teachers, albeit informally, that student writing in response to those questions has often been brief, a simple answer to the question. In these cases, the writing can take on the quality of an interview consisting of teacher questions, brief student responses and then more teacher questions.

It is important, therefore, to understand what strategies were used by a teacher whose students wrote considerably more than the required minimum and seemed to be engaged in the writing they were doing. This particular teacher's strategies for writing involved responding primarily to topics that the students

wrote about, rather than initiating her own topics (although she did, to a much lesser extent, initiate topics as well). When writing about a given topic, she predominantly contributed information, opinions, etc., rather than simply eliciting writing from the students with questions. In fact, she rarely asked a question about a topic without also making a contribution to it. The result is that many students wrote extended text about a wide range of topics.

This teacher's dialogue journal writing differs markedly from patterns of spoken interaction which have been found to typify most classrooms. She acted as a supporter and sustainer of student participation rather than as an initiator and prompter of it. But she was not simply a supporter; she was also a co-participant in the writing. She did not remain aloof to review, comment on, and question what the students expressed, but entered into the interaction herself, as a writer <u>with</u> each student. The students could therefore view her not only as someone who prompted <u>their</u> writing, but as a genuine collaborator in the writing process.

The results of this study do not indicate that the teacher varied the strategies she used according to the students' level of English proficiency. This may, however, be due to the fact that the study was limited to broad-based strategy categories. Kreeft et al. (1984), in a study of the dialogue journal writing of this teacher and six limited English proficient students, found that more detailed features of her writing (question type, syntactic complexity, etc.) were altered according to different student proficiency levels. Future research might examine variation in such features of the writing of other teachers with larger numbers of students.

Although written questions, either alone or in combination with teacher contributions, resulted in student responses more frequently than did teacher contributions with no accompanying question, frequency of response to questions did not necessarily result in more writing or in more complex writing. When a

question was asked with no accompanying contribution, it gave the student very little information to build on and provided the opportunity for limited language production--a simple answer to the question. Most students tended to write more in their journals when they responded to an entry that contained contributions by the teacher as well. With the high-proficiency students, this tendency is particularly evident.

This study indicates that teacher strategy can affect student response to some degree, but it is not necessarily the only determining factor. English proficiency is certainly a factor influencing student written production. A cursory examination of topic suggests that it is also important. When these students had a topic they wanted to write about, sometimes it seemed to matter little what the teacher did in her entry; they wrote about their topic. If they were not interested in a topic, the teacher could write about it extensively in her entry, only to receive a minimal response or no response at all. On the other hand, when teacher and student found a topic of common interest, the topic itself seemed to take over, as they both shared, questioned, and built on each other's contributions.

Unfortunately, we are unable to determine from these data what kind of student writing would result if the teacher had exerted more control over it--by initiating the majority of the dialogue journal topics or by simply asking questions of the students after each of their entries, attempting to directly elicit more writing and making no further contribution. There are indications, though, that teachers could "unwittingly frustrate the interaction" with such an approach (Morroy, 1985). Morroy cites an incident in dialogue journal writing in which a teacher

> urged a student several times during the course of the interaction to answer her questions. Instead of attending to the teacher's questions, however, the student (who had previously been quite prolific) dramatically decreased in his writing, to a point where he almost stopped writing altogether. (p. 112)

Hall and Duffy (1987) observed in the dialogue journal writing of a teacher and 5-year-old students that when the teacher "was following the way that teachers often talk to children in classrooms . . . doing all the asking of questions . . . the children were simply replying . . . and not actually entering into the dialogue" (p. 526). Later, when the teacher began to make statements, the children began "branching out on their own and engaging in meaningful written conversations" (p. 527).

Wood et al. (1984) describe the way that teacher questions can inhibit student participation in oral classroom interaction, arguing that a high frequency of questions can "turn a conversation into an inquisition" (p. 56).

> Children tend to reply to such interrogations with the minimum required--i.e. one word (if they cannot get away with a mere nod or shake of the head) . . . because our teachers were asking questions at every opportunity, the children had little chance to initiate their own themes. (p. 57)

The findings of this study of written interaction--that the teacher's writing was <u>not</u> dominated by questions but characterized by contributions, and that the students rarely responded to these contributions with minimal entries--suggest that the success of the dialogue journal interaction lies precisely in the teacher's participation as an active partner in a meaningful, <u>shared</u> communication.

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